

## **Predicting asymmetric phospholipid microstructures in solutions**

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Fig. S1

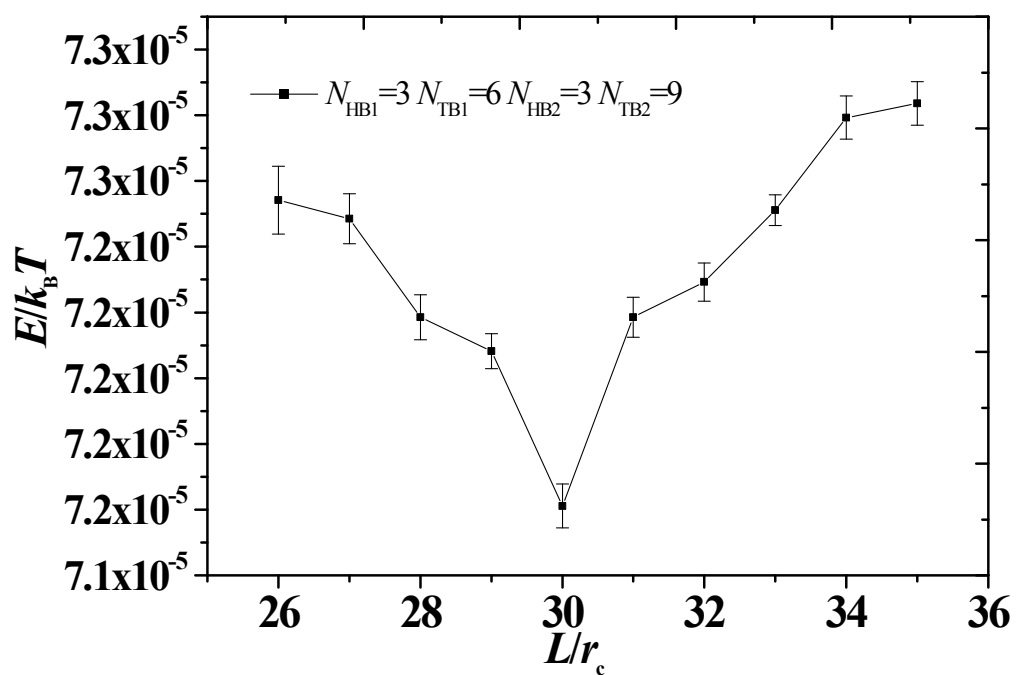


Fig.S1 The average energy of molecule as function of box size  $L$ . The phospholipid with the parameter of  $N_{HB1}=3$ ,  $N_{HB2}=3$ ,  $N_{TB1}=6$ , and  $N_{TB2}=9$ .

Fig.S2

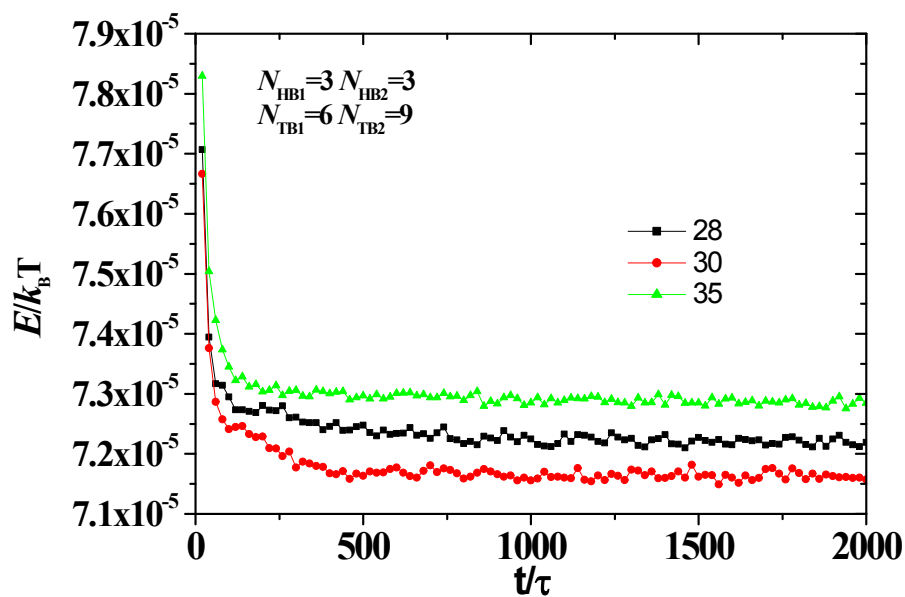


Fig.S2 The average energy of molecule as function of time step. The phospholipid with the parameter of  $N_{HB1}=3$ ,  $N_{HB2}=3$ ,  $N_{TB1}=6$ , and  $N_{TB2}=9$ . The box sizes  $L$  are set to be  $L=28r_c$ ,  $30r_c$  and  $35r_c$ .

Fig.S3

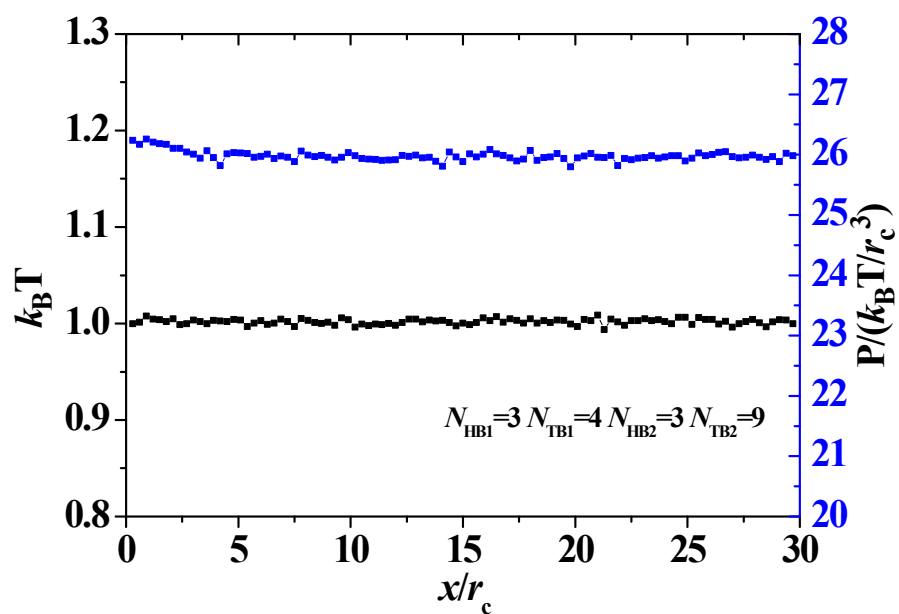
Fig.S3 The local pressure  $P$  and temperature  $T$  as functions of  $x$ .

Fig.S4

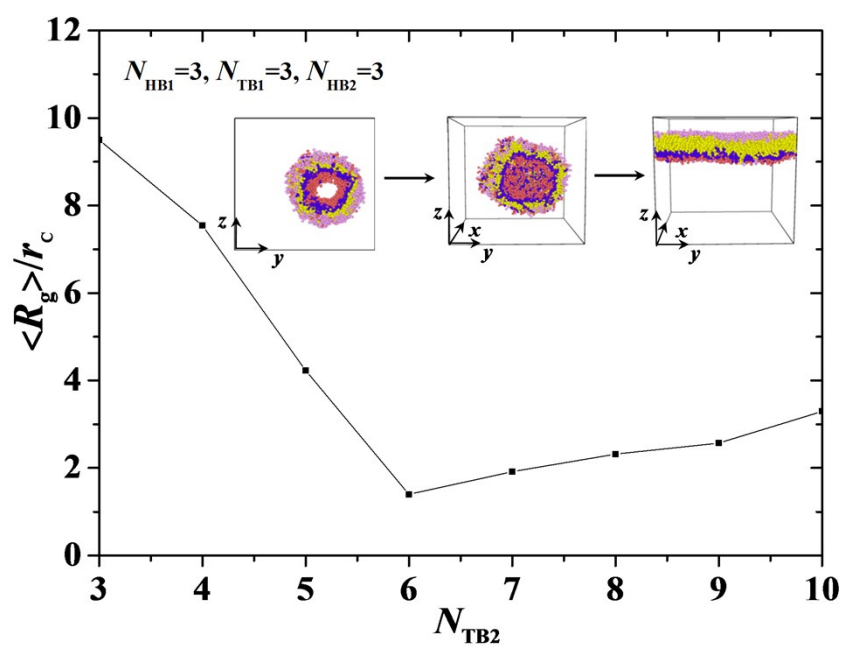


Fig.S4 The average of radius of gyration as a function of  $N_{TB2}$ , with  $N_{HB1} = 3$ ,  $N_{TB1} = 3$ , and  $N_{HB2} = 3$ . The corresponding asymmetric structures are also inserted.